ABSTRACT

A non-aqueous electrolyte secondary battery has a positive electrode having a positive electrode collector, on which a positive electrode active material layer containing a positive electrode active material as a complex oxide of Li and transition metals are formed, and a negative electrode having a negative collector, on which a negative electrode active material layer is formed. The non-aqueous electrolyte secondary battery is a gel or solid non-aqueous electrolyte secondary battery having a battery device in which a positive electrode and a negative electrode are laminated with an electrolyte layer therebetween in a film-state packaging member constructed by metal foil laminated films, and containing a lithium salt, a non-aqueous solvent, and a polymer material. The concentration in mass ratio of a free acid in the electrolyte layer is 60 ppm and less. Average particle diameter of the positive electrode active material lies in a range from 10 to 22 μm, the minimum particle diameter is 5 μm or larger, the maximum particle diameter is 50 μm or smaller, and specific surface of the positive electrode active material is 0.25 m^2/g or smaller. Lithium carbonate (Li_2CO_3) contained in the positive electrode active material is 0.15 percent by weight and less. Moisture contained in the positive electrode active material is 300 ppm and less.